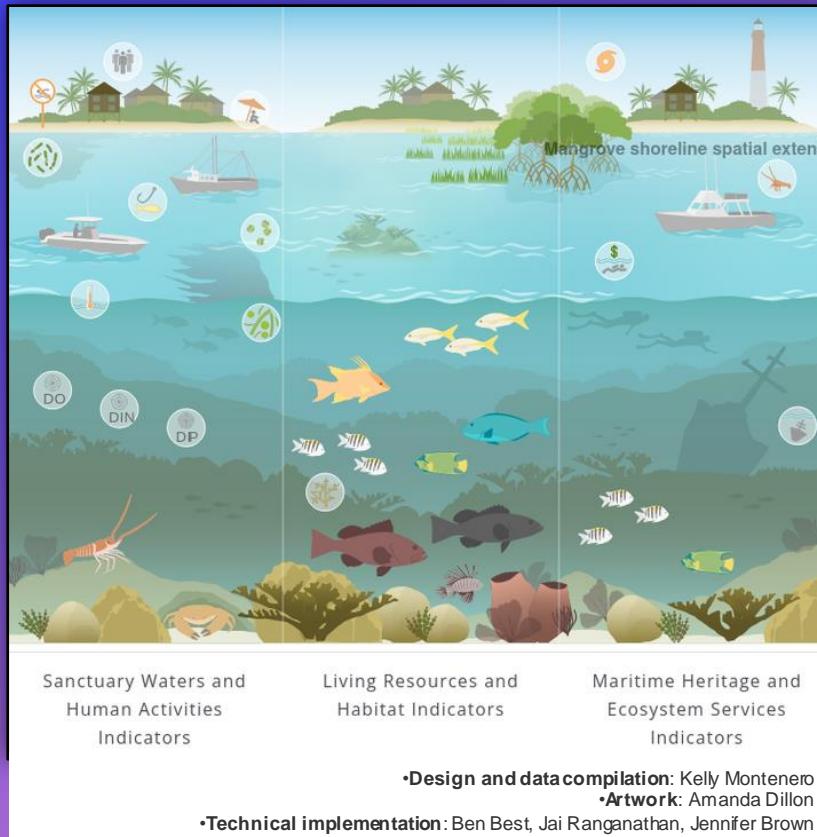


The Southeast US Marine Biodiversity Observation Network (MBON): Toward Operational Marine Life Data for Conservation and Sustainability (+ MBON Team Leader)

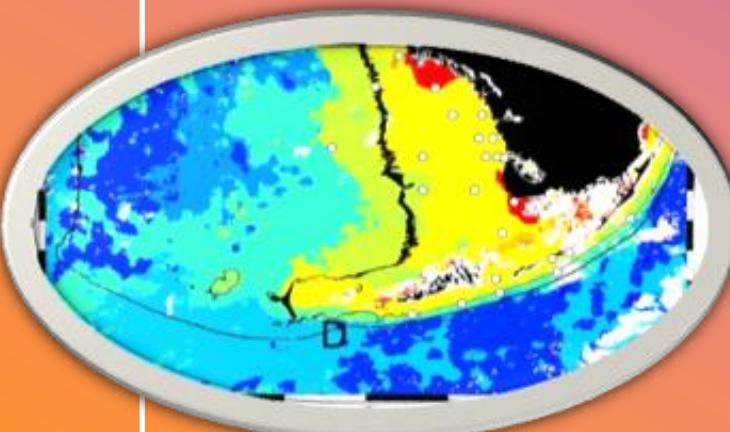


F. Muller-Karger
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J. Brown, A. Benson



OBJECTIVES

- 1.) Co-design biodiversity monitoring and assessment
- 2.) Converge on subsets of Essential Ocean Variables (EOVs) and Essential Biodiversity Variables (EBVs)
- 3.) Contribute to protocols for distribution of products
- 4.) Serve as MBON Team Leader

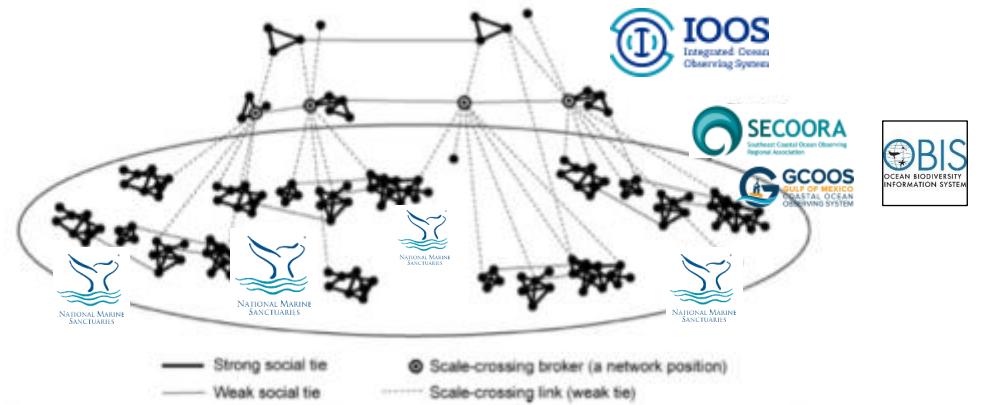


Engage Users:

**GCOOS and SECOORA stakeholder
workshops with
National Marine Sanctuaries**

1-2 workshops per year

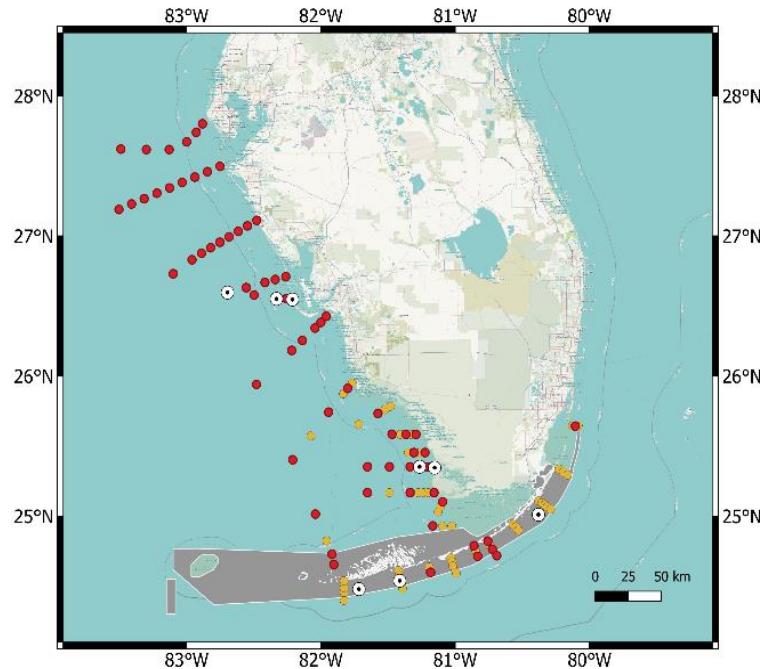
Monitor
Gray's Reef
Florida Keys
Flower Garden Banks



Kathy Broughton (ONMS) comment on MBON:

helpful in developing condition reports for the Flower Garden Banks, Channel Islands, Florida Keys

ONMS needs - noise, eDNA, indicator development for condition reports



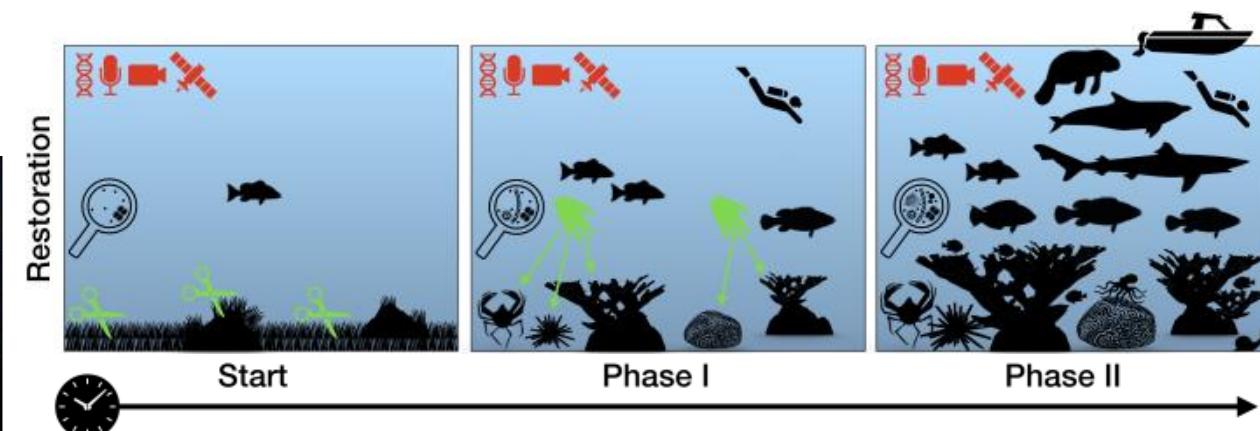
NOAA MBON cruises

(every 2 months)



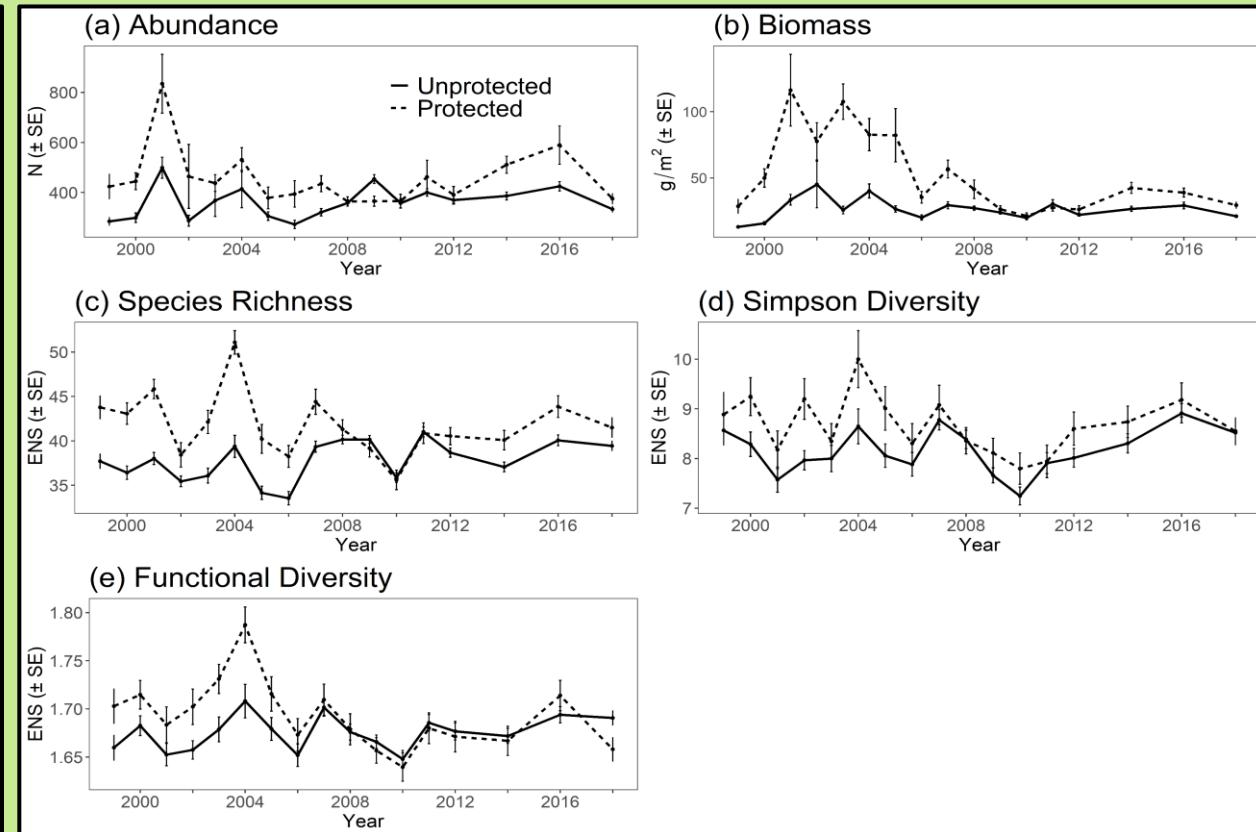
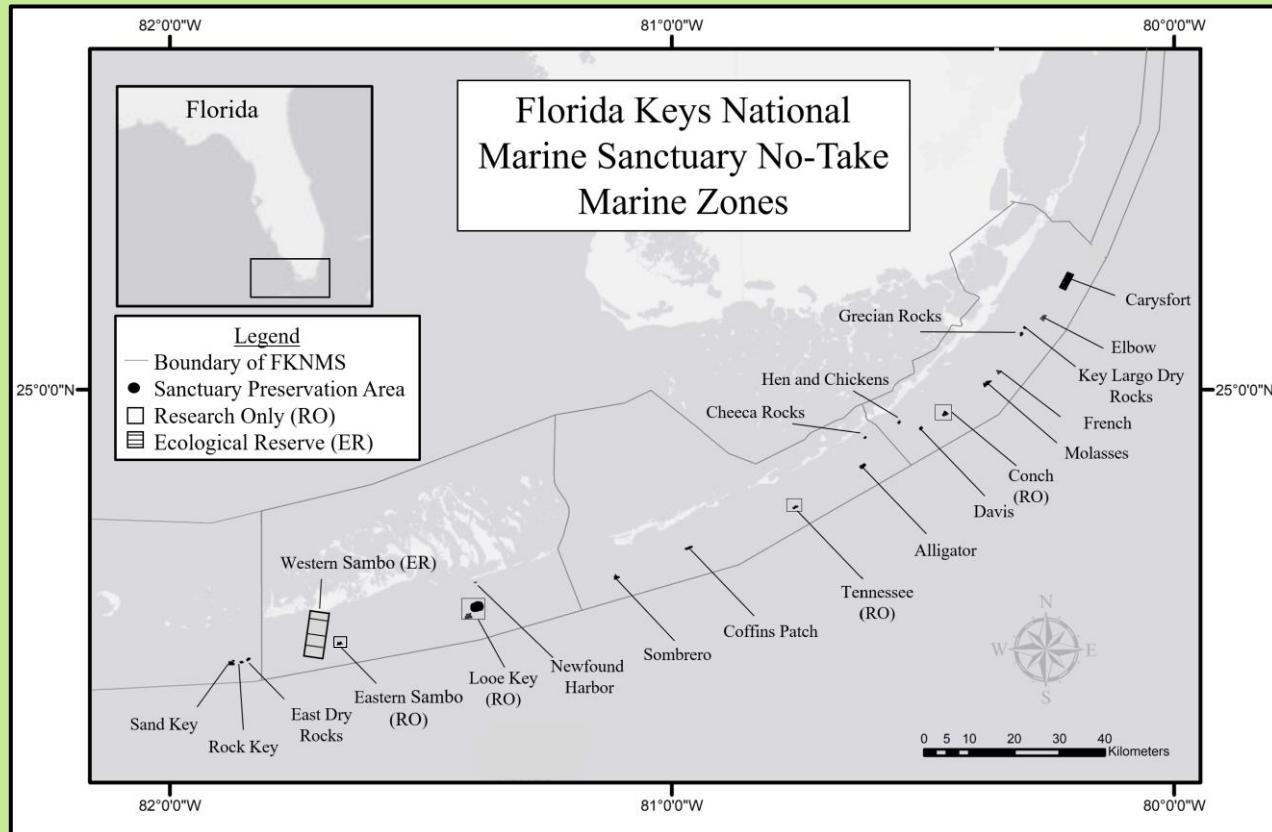
EOVs, EBVs, indicators:

- Biodiversity, abundance, distribution of organisms
- eDNA, acoustics, soundscapes, traditional sampling
- Marine biogeography using remote sensing
- Identify biodiversity hotspots



Florida Keys National Marine Sanctuary

Reef Fish Visual Census (RVC) Data (1999- present)



Documenting baselines for
discovery, status assessment

Cross-MBON Coordination: Working Groups

- Stakeholder engagement
- Indicators
- eDNA
- Animal Tracking
- BioSound (passive acoustics)
- Ecosystem Function (Functional Traits)
- Remote Sensing / Seascapes
- Data Management and Cyberinfrastructure
- Annual meeting
- International engagement
 - GEO BON MBON, Marine Life 2030
 - UCAR/COL, Smithsonian / MarineGEO, IOOS
 - OKAN, MBON Secretariat, Ocean Decade Coordinating Unit, etc.

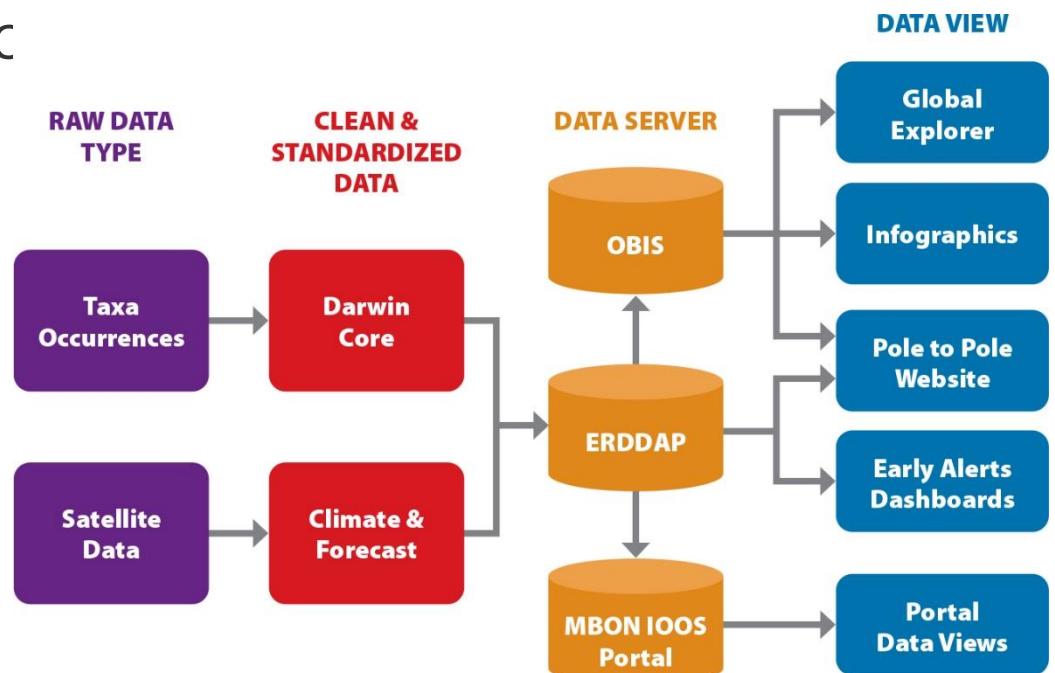
Cross-MBON Data Management DMAC Working Group

MBON and OBIS/GBIF collaboration

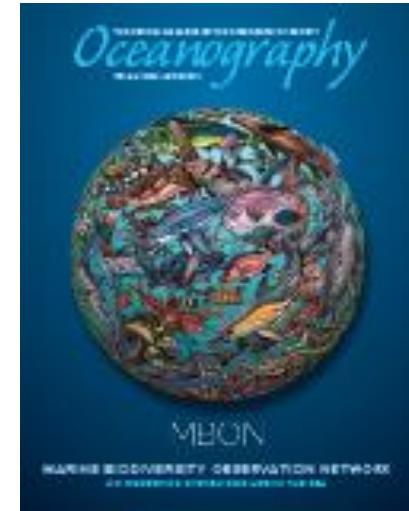
Mapping data flow: collection to publication

Examples:

- Rockfish (California/Pacific)
- Reef fish (Florida keys/Atlantic)
- Satellite data (early alert dashboards)
- Pole to Pole Data Viewer
- IOOS MBC



Data Management and Interactive Visualizations



Benson et al., 2021
<https://doi.org/10.5670/oceanog.2021.220>

Indicators: Cross-MBON / Sanctuaries / IEA / IOOS

SOUTHEAST MBON

Web-enabled products / apps / dashboards

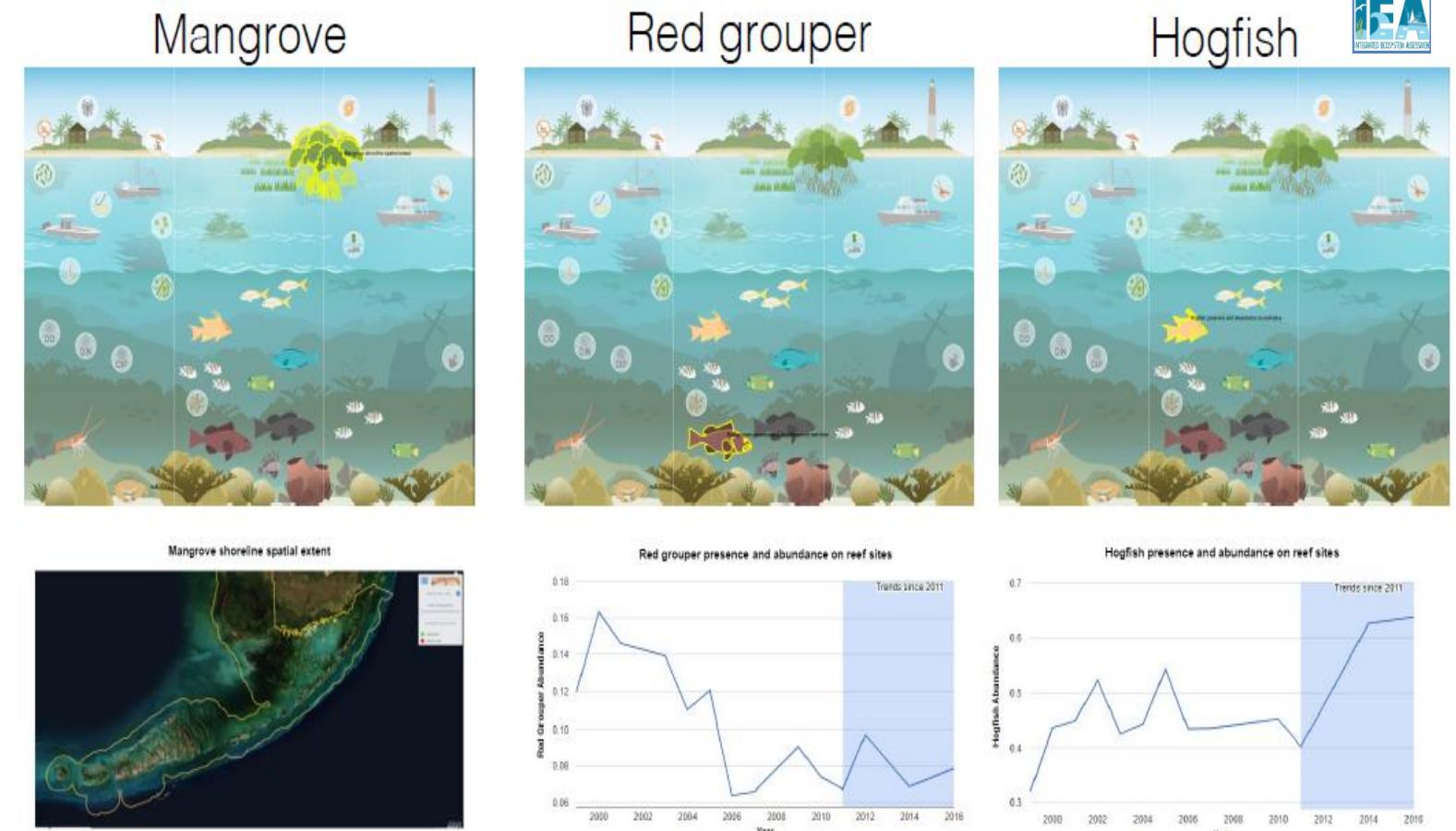
**Evolve open-source infographics
and synthesis applications**

Products:

- Indicators and visualizations

Apps:

- "Infographiq "
- SeascapR
- OceanViewer (NESDIS/CoastWatch)
- OBIS
- Dashboards, storymaps, narratives



[→ SanctuaryWatch \(ioos.us\)](http://SanctuaryWatch.ioos.us)

Marine BioData Mobilization Workshops

Goal: Move scattered, unorganized "raw" data from researcher laptops into OBIS

- ~60 attendees in each of 2022 & 2023
- Data-Carpentries-based curricula design

- Powered by the Standardizing Marine BioData Working Group (SMBD)

- https://github.com/ioos/bio_data_guide

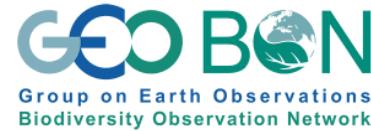


Matt Biddle, Abby Benson, Tim Van Der Stap, Tylar Murray, Dylan Pugh, Ben Best, Marion Stoessel, and others

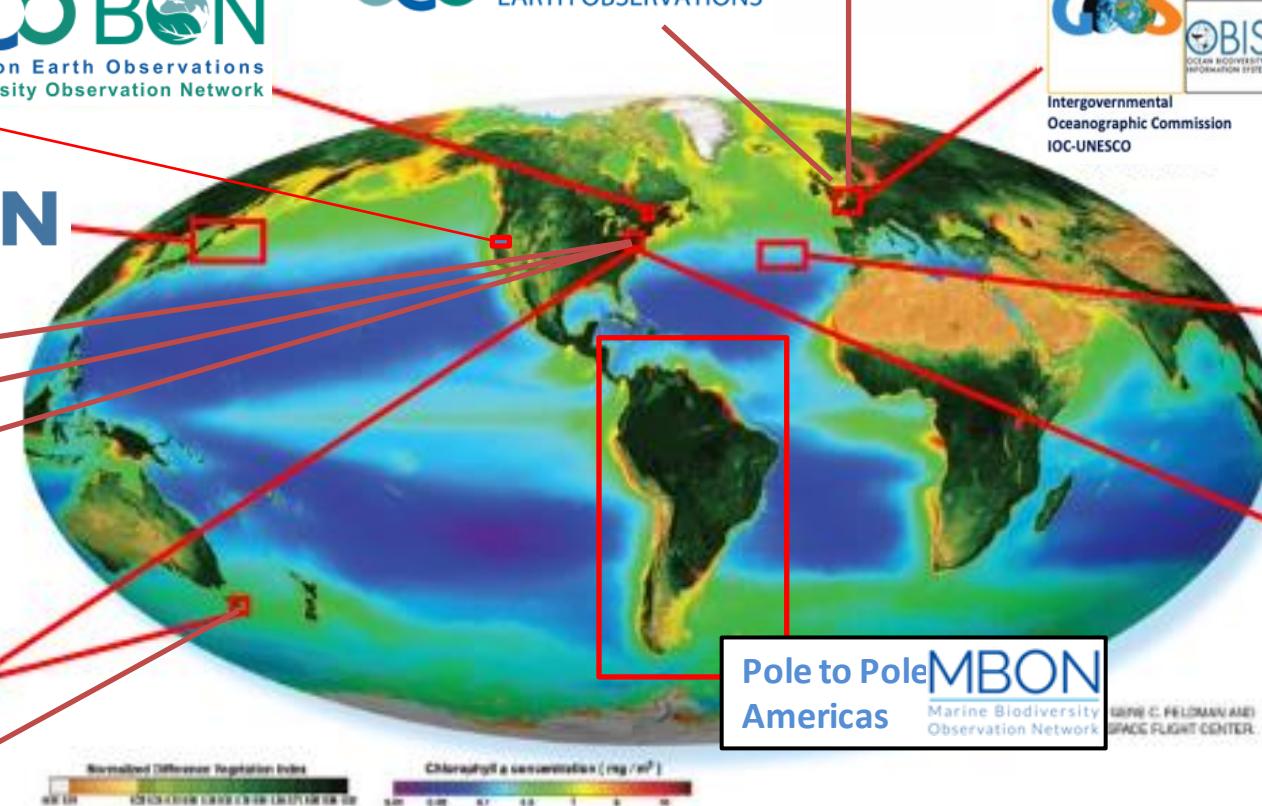




International Engagement



<http://marinebon.org>



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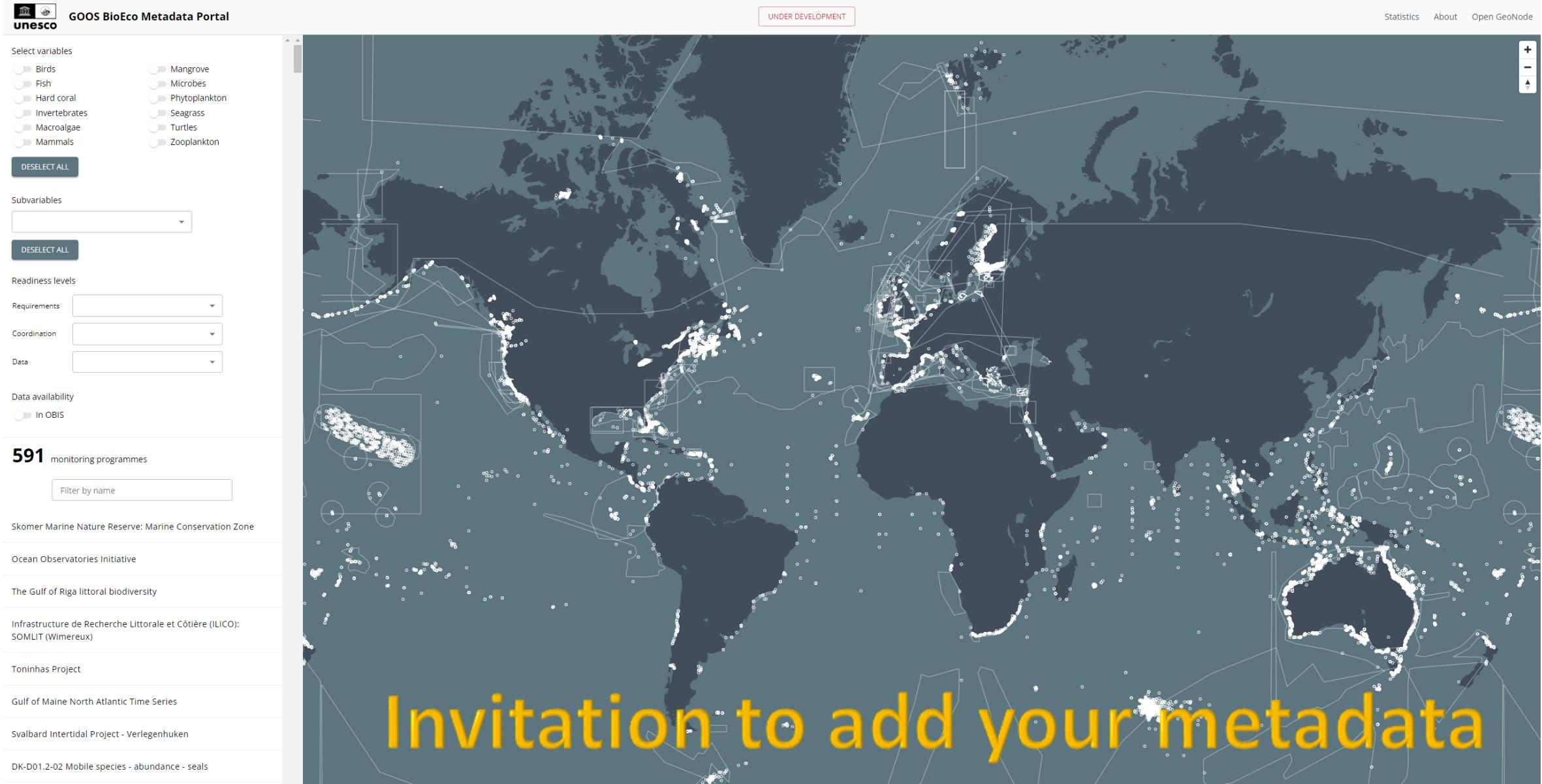
Frank Muller-Karger / carib@usf.edu



BioEco Metadata Portal (goosoceean.org)



Biology and Ecosystems



Building global knowledge of marine life for local action



2021
2030 United Nations Decade
of Ocean Science
for Sustainable Development

marinelife2030.org

Collaboration with other
Ocean Decade Programs:

OBON, SUPREME, OARS, SMARTNET,
DOOS, ECOPS, Challenger150,
Maritime Acoustic Environment,
GOOS Co-Design...



Smithsonian





+

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THANK YOU

<http://marinebon.org>

<http://marinelife2030.org>

